

NOTES ON THE FLORA
OF THE CHINATI MOUNTAINS,
PRESIDIO COUNTY, TEXAS

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The first definite records of botanical observations in the Chinati Mountains are those of V. Havard (1885). G. C. Nealley (1888) collected grasses and forage plants and made general observations in western Texas, visiting the "Chenete" Mountains in late October, 1887. M. S. Young made general collections in the foothills of the Chinatis in September, 1914, but probably never reached the main mass of the mountains (Tharp 1962). The most extensive botanical explorations of the Chinatis were begun by L. C. Hinckley in August, 1936. Collecting trips were made to Chinati Peak in 1945 by C. H. Muller and Rogers McVaugh. B. H. Warnock began working in the area both alone and with Hinckley during the 1940's; specimens from these and subsequent trips are deposited at TEX-LL and SRSC herbaria.

The present authors made collecting trips into the area in June and October of 1977. Voucher specimens will be deposited in the University of Texas at Austin Herbaria (TEX-LL). Nomenclature for species previously reported from Texas is in accordance with Correll and Johnston (1970).

The rugged summits of the Chinati Mountains rise over 1400 m above the surrounding pediments, dominating the 30 km expanse between Pinto Canyon and Shafter in south central Presidio Co. The Chinati Mountains are one of three major mountain ranges in the Big Bend area of Trans-Pecos Texas that are of igneous origin, the others being the Chisos and Davis Mountains. The considerable erosive force of tributaries to the Rio Grande, such as Pinto and Dead Horse canyons, has uncovered various sedimentary rocks of Permian and Cretaceous age. These localized outcrops of limestone, sandstone, and shale, primarily along the margins of the intrusive and volcanic rocks, are the substrates for plant assemblages that are noticeably different from those found on neighboring igneous slopes.

On the limestone hills just N of Chinati Peak, associated with *Agave lecheguilla*, *Dasyliirion leiophyllum*, *Quercus pungens*, *Mortonia scabrella*, *Leucophyllum frutescens*, *Ayenia pilosa*, and *Bouteloua ramosa*, we found two species of particular interest.

POLYGALA NUDATA Brand. On limestone hills N of Chinati Peak between Dead Horse and Pinto Canyons; *Butterwick* 3807B; 9 Jun 1977. This is the fourth known United States locality for this perennial *Polygala*, which until recently has been placed in synonymy with the Mexican *P. minutifolia* Rose (Wendt, 1978). *Polygala nudata* is characterized by its upright broom-like incurved-puberulous stems and short seed pubescence.

PETERIA SCOPARIA Gray. Infrequent on limestone hills N of Chinati Peak; *Butterwick & Lott* 3829; 11 Jun 1977. This species is previously unreported from the Chinatis but its presence there could be expected. It is poorly represented in herbaria and generally occurs in small, scattered populations.

Indian Cave Canyon, a side canyon to Dead Horse Canyon, on the N side of the Chinatis, provides a sheltered, more mesic habitat for *Prunus serotina*, *Fraxinus cuspidata*, *F. arizonica*, *Quercus gambelii*, *Q. grisea*, *Symphoricarpos* sp., *Heuchera rubescens*, *Aquilegia* sp., and *Pericome caudata* in its upper reaches, which lead to Chinati Peak. In this canyon we collected a species of fern reported for the first time from the Chinatis.

POLYPODIUM THYSSANOLEPIS Kl. Uncommon in crevices of cliffs and boulders, lower Indian Cave Canyon, with *Garrya ovata*, *Selaginella rupincola*, *Bommeria hispida*, *Eupatorium rothrockii*, *Ungnadia speciosa*, *Silene laciniata*, *Sedum wrightii*, and *Cheilanthes wrightii*; *Butterwick & Lott* 3897; 16 Oct 1977. According to T. L. Wendt,¹ who is preparing a treatment of Chihuahuan Desert *Polypodium*, this collection is of an undescribed variety of the southwestern United States and northern Mexico. It was previously known in Texas only from the Davis and Chisos Mountains.

The summit of Chinati Peak is surprisingly level, resembling a high mesa top. *Stipa tenuissima* occurs beneath the numerous gray oaks, and *Bouteloua gracilis* covers the more open areas. *Sedum wrightii*, *Talinum parviflorum*, *Heuchera rubescens*, *Aletes acaulis*, and *Triodanis biflora* are a few herbaceous species collected on or near the peak.

OPUNTIA POLYACANTHA Haw. var. TRICHOPHORA (Engelm. & Bigel.) Coult. Locally common among grasses on the summit of Chinati Peak; *A. M. Powell et al.* 3109; 7 Jun 1977. This collection represents the southernmost known population of this widespread species, which ranges as far north as Peace River, Alberta. The variety occurs in Trans-Pecos Texas and the Panhandle, to Colorado and Arizona through western Oklahoma.

GAURA HEXANDRA Gomez Ortega subsp. GRACILIS (Woot. & Standl.) Raven & Gregory. Rare in rocky igneous soils near summit of Chinati Peak, ca 2313 m elev; *Butterwick & Lott* 3774; 7 Jun 1977. Scarlet flowers, reddish stems with white spreading hairs, and truncate fruit bases distinguish this species, a new state record for Texas and an extension of its range

¹The undescribed variety of *Polypodium* mentioned above is now published as *P. thyssanolepis* Kl. var. *riograndense* Wendt (*Amer. Fern J.* 70: 5-11. 1980).

from Arizona and New Mexico to Sonora, Chihuahua, and Durango, and now to western Texas.

Two large canyons on the S side of the Chinati Mountains yielded noteworthy collections. Both are relatively closed drainages whose walls provide some protection from the southwesterly winds. Of particular interest was Tinaja Prieta (Palillos) Canyon, with its numerous tinajas and seep springs.

PLUMBAGO SCANDENS L. On low gravelly terrace of lower Tinaja Prieta Canyon, just above falls, and throughout the upper reaches of the canyon; *Butterwick & Lott* 3872; 16 Jun 1977. The range in Texas is now extended from Cameron and Hidalgo counties in extreme southern Texas. Known also from Pima Co., southern Arizona, and from northern Mexico and southern Florida, this species is widespread in the tropical Americas.

SIPHONOGLOSSA LONGIFLORA (Torr.) A. Gray. Rare among boulders in lower part of E branch of San Antonio Canyon, S side of Chinati Mountains; *Butterwick & Lott* 3864B; 15 Jun 1977. The essentially glabrous *S. longiflora* has petioled leaves and clusters of white tubular flowers in the upper axils which easily distinguish it from the coarsely pubescent *S. pilosella*. The Chinati Mountains locality for this species extends its range eastward from southern Arizona and Sonora and is apparently the first documented report of the species from Texas. This species is not included in the *Manual of the vascular plants of Texas* (Correll & Johnston 1970), nor are any previous Texas collections on deposit in TEX-LL, SRSC or GH. Rickett (1970) cited the species as "reported in western Texas" but stated that he had seen no specimens of it from Texas.

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